



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,670	10/17/2003	Shota Mori	1614.1368	8269
21171	7590	09/28/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			SEDIGHIAN, REZA	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/686,670	MORI ET AL.
Examiner	Art Unit	
M. R. Sedighian	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION

**WHENEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 17 October 2003.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-11 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1,2,4 and 9 is/are rejected.  
7)  Claim(s) 3,5-8,10 and 11 is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 17 October 2003 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a))

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/17/03.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Takatsu et al. (US Patent Application Publication No: 2003/0025965 A1).

Regarding claims 1-2, Takatsu teaches a wavelength multiplexing method (MUXA, fig. 8) wherein a plurality of optical signals each being assigned a unique wavelength ( $\lambda_1, \lambda_2, \dots, \lambda_n$ , fig. 8) are input to and output from a plurality of variable optical attenuators (VATA1, VAT, fig. 8), respectively, wavelength multiplexed by a multiplexer (MUXA, fig. 8) and output from the multiplexer (page 7, paragraph 0106); the wavelength multiplexed output is spectrum analyzed by an optical monitor unit (spectrum analyzer, fig. 8), and an spectrum analyzed level of each of the optical signals is measured (pages 7-8, paragraph 0107); and an input level of each of the optical signals input from the respective variable optical attenuator to the multiplexer is adjusted by the respective variable optical attenuator such that the spectrum-analyzed levels of all the optical signals become the same (pages 7-8, paragraph 0107), the method comprising the steps of: detecting (MONA1, fig. 8) the input level of each of the optical signals from the respective variable optical attenuator to the multiplexer (page 7, paragraph 0106); and controlling (CPU 5-1 and CPUA1, fig. 8) of each of the variable optical attenuators (VAT, fig. 8) based on a difference between the input level of the respective optical signal from the variable optical

attenuator to the multiplexer and the spectrum analyzed level measured by the optical monitor unit (page 8, paragraph 0108).

Regarding claim 9, Takatsu teaches the attenuation amount controlling means suspend controlling of the attenuation amount of the variable optical attenuator when level change of the input optical signal exceeds a dynamic range of the variable optical attenuator (page 8, paragraph 0108).

3. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Maeda (US Patent No: 6,768,831 B2).

Regarding claims 1-2, Maeda teaches a wavelength multiplexing method (503, fig. 19) wherein a plurality of optical signals each being assigned a unique wavelength are input to and output from a plurality of variable optical attenuators (VAT 61, fig. 19), respectively, wavelength multiplexed by a multiplexer (503a, 503b, 503c, fig. 19) and output from the multiplexer (col. 15, lines 15-17); the wavelength multiplexed output is spectrum analyzed by an optical monitor unit (67, fig. 19), and a spectrum analyzed level of each of the optical signals is measured (col. 15, lines 15-20); and an input level of each of the optical signals input from the respective variable optical attenuator to the multiplexer is adjusted by the respective variable optical attenuator such that the spectrum-analyzed levels of all the optical signals become the same (col. 15, lines 30-32, note that monitoring and control unit 67 control the attenuation amounts of respective VATs 61 of fig. 19), the method comprising the steps of: detecting (63a, 63b, 63c, fig. 19) the input level of each of the optical signals from the respective variable optical attenuator (61a, 61b, 61c, fig. 19) to the multiplexer (503a, 503b, 503c, fig. 19); and controlling

each of the variable optical attenuators (VATs 61, fig. 19) based on a difference between the input level of the respective optical signal from the variable optical attenuator to the multiplexer and the spectrum analyzed level measured by the optical monitor unit (col. 15, lines 25-34).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takatsu et al. (US Patent Application Publication No: 2003/0025965 A1) in view of Banerjee et al. (US Patent No: 6,671,466 B1).

Regarding claim 4, Takatsu differs from the claimed invention in that Takatsu does not disclose optical attenuators is configured by two or more variable optical attenuators that are cascaded. However, it is well known to incorporate a cascade connection of optical attenuators to provide further stages of attenuation if desired. For example, Banerjee teaches a cascade connection of variable optical attenuators (VAR. ATTEN. fig. 4). As it is taught by Banerjee, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a cascade connection of attenuators, or a plurality of attenuators, for the attenuator in the VATAs of Takatsu to further adjust and provide desired output power levels.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda (US Patent No: 6,768,831 B2) in view of Banerjee et al. (US Patent No: 6,671,466 B1).

Regarding claim 4, Maeda differs from the claimed invention in that Maeda does not disclose optical attenuators is configured by two or more variable optical attenuators that are cascaded. It is well known to incorporate a cascade connection of optical attenuators to provide further stages of attenuation if desired. For example, Banerjee teaches a cascade connection of variable optical attenuators (VAR. ATTEN. fig. 4). As it is taught by Banerjee, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a cascade connection of attenuators, or a plurality of attenuators, for the attenuators VAT 61 of Maeda to further adjust and provide desired output power levels.

7. Claims 3, 5-8, 10-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*m. R. Sedighian*  
M. R. SEDIGHIAN  
PRIMARY EXAMINER